

PATENT
Case M 6817 MANCO

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of
Sobonya et al.

Serial No. 09/891,568
Filed: June 26, 2001
Confirmation No. 1960

Examiner: U. C. Ruddock
Art Unit: 1771

TITLE: COMPOSITE SHEET MATERIAL

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Assistant Commissioner for Patents on the date shown below.

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Mary Lynne Carlisle
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AMENDMENT

Assistant Commissioner of Patents
Washington, DC 20231

Sir:

In response to the Official Action of June 20, 2002, Applicants respectfully request that the following amendment be entered in the application and that the application be reconsidered in light of the amendment and the following discussion.

IN THE CLAIMS

Please enter the following new claim 16 in the application.

A9 16. (New) A composite sheet product of claim 1 wherein the foam resin comprises a foamed polyvinyl chloride plastisol, the scrim comprises woven polyester and the sheet product has a thickness of from about 45 mills to about 150 mills.

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DISCUSSION

Applicants respectfully request that new claim 16 be entered in the application. New claim 16 is fully supported in the specification and claims as originally filed. No new matter has been entered by way of new claim 16.

Claim 9 stands rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention. The Examiner states:

"Claim 9 is considered indefinite because Applicant discloses "at least one side has been smoothed." It is unclear to the Examiner what side is being smooth. Is the foam side of the composite being smoothed, or is the scrim side of the composite being smoothed? Clarification is required."

As presently claimed, the sheet product is a composite comprising a scrim embedded in a continuous coating of a foamed resin. The structure is not a laminate. As set forth in the specification and as shown in the drawings, the continuous coating of the foamed resin covers both sides of the scrim. Therefore, there is no scrim side or foam side. Both sides are foam. The two sides of the composite sheet product are similar and either/or both sides can be smoothed if desired. Applicants therefore respectfully submit that claim 9 is not indefinite and clearly sets forth what Applicants consider to be their invention. Reconsideration and withdrawal of the rejection is respectfully requested.

Before discussing the rejections over the prior art, Applicants deem it prudent to set forth what they consider to be their invention. As presently claimed, and as shown in the drawings, the present invention comprises a one piece composite sheet product comprising a scrim embedded in a continuous coating of a foamed resin. The scrim is embedded in the foamed resin and is not a laminate in which the foamed resin is attached to the scrim. The foamed resin is formed as a continuous coating, covering both side of the scrim, which as defined in the specification means that there are no apertures which extend from one side of the composite sheet to the opposite side of the composite sheets. The combination of a scrim embedded in a continuous coating of a foamed resin provides properties to the structure not provided in structures in which the foamed resin is not continuous. The impermeability to spilled liquids is particularly useful when the structure is used as a shelf liner. Applicants submit that the composite sheet of the present invention is neither taught nor suggested by the prior art references cited by the Examiner.

REJECTIONS UNDER 35 U.S.C. 102

Claims 1, 2, 3, 5, 10 and 11 stand rejected under 35 USC 102(b) as anticipated by Schottenfeld (US 5,707,903). Applicants respectfully submit that Schottenfeld neither teaches nor suggests

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the present invention.

Schottenfeld is deficient as a reference on which a rejection under 35 USC 102(b) can be based. The Schottenfeld structure requires a non-slip pad comprising a scrim coated with an open cell polyvinyl chloride foam (see abstract). The open cell foam provides apertures which extend from one surface of the structure to the other surface and is not continuous. In contrast to the Schottenfeld disclosure, Applicant's composite sheet comprises a scrim embedded in a continuous coating of a foamed resin. As set forth in the specification, a continuous coating is a coating which does not contain apertures which extend from one surface of the sheet to the opposite surface. Schottenfeld requires an additional laminated layer to provide a smooth water impermeable coating. X

Since Schottenfeld neither teaches nor suggests a continuous coating of a foamed resin over the scrim, applicants submit that Schottenfeld is not pertinent to the present invention and a rejection based on 35 USC 102(b) is untenable. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claims 1, 2, 3, 7, 9, 10, 11 and 14 stand rejected under 35 USC 102(e) as anticipated by Hawley et al. (US 6,130,174, hereinafter Hawley et al. '174). Applicants respectfully submit that Hawley et al. '174 neither teaches nor suggests the present invention. As presently claimed, the coating of foamed resin is continuous. The foamed resin utilized in the Hawley et al. '174 structure is a non-continuous porous foam (see col. 2, lines 55 and 56). The non-continuous nature of the foamed plastic utilized in forming the Hawley et al. '174 scrim is clearly shown in fig. 2. The description of the non-continuous nature of the porous foam layer utilized in Hawley et al. '174 is discussed at col. 2, lines 59-66. X

Applicants therefore respectfully submit that a rejection under 35 USC 102(e) over Hawley et al. '174 is untenable. Applicants therefore respectfully request that the rejection be reconsidered and withdrawn.

Claims 1, 2, 3, 7, 9, 10, 11 and 14 stand rejected under 35 USC 102(e) as anticipated by Hawley et al. (US 6,221,796; hereinafter noted as Hawley et al. '796). Applicants respectfully submit that Hawley et al. '796 neither teaches nor suggest the present invention. Hawley et al. '796 is a continuation of application Ser. No. 09/268,565 now patent number 6,130,174. Hawley et al. '796 has the same disclosure as Hawley et al. '174 and discloses that the plastic foam surrounding the scrim is non-continuous (col. 2, lines 58-61). Since the foam is non-continuous, Applicants submit that a rejection under 35 USC 102(e) over Hawley et al. '796 is untenable and respectfully request that the rejection be reconsidered and withdrawn.

To be a proper reference on which a rejection under 35 USC 102 can be based, the disclosure must teach every limitation of the invention claimed. Hawley et al. '796 is deficient in that the foam layer is not continuous. Applicants respectfully submit that the rejection is untenable.

Claims 1, 2 and 10 stand rejected under 35 USC 102(b) as anticipated by Dehondt (US 5,346,278). Applicants respectfully submit that Dehondt neither teaches nor suggests the present invention. Dehondt is directed to a non-slip cushion. The non-slip cushion comprises a fabric constructed of a scrim material so

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as to possess a substantial resistance to deformation in two directions at right angles to each other. The scrim has openings formed in the fabric which, in a preferred embodiment are in a checkerboard pattern. Globules of rubbery polymeric material are deposited on the scrim as by dipping the scrim in a plastic foam material. The structure has openings or enlarged open gaps formed by the scrim (col. 2, lines 32-34). Applicants respectfully submit that the foamed plastic does not form a continuous coating over the scrim and therefore the teaching of Dehondt are not pertinent to the present invention.

Applicants respectfully submit that to be a proper reference on which a rejection under 35 USC 102(b) can be based, a reference must show every limitation in the claimed invention. Dehondt is deficient in neither teaching nor suggesting a scrim embedded in a continuous foamed plastic coating. Applicants therefore respectfully submit that the rejection is untenable and request that the rejection be reconsidered and withdrawn.

All of the references on which the rejections under 35 USC 102 are based, are deficient in neither teaching nor suggesting a scrim embedded in a continuous foamed resin coating. Applicants therefore respectfully submit that all of the rejections under 35 USC 102 are untenable since they fail to teach or suggest a critical feature of the present invention. Withdrawal of all of the rejections under 35 USC 102 is respectfully solicited.

REJECTIONS UNDER 35 USC 103

Claims 4 and 12 stand rejected under 35 USC 103(a) as unpatentable over Schottenfeld in view of Owen (US 5,863,845; hereinafter noted as Owen '845) or Owen (US 5,874,371; hereinafter noted as Owen '371). The Examiner states that Schottenfeld discloses the claimed invention except for the teaching that the scrim is non-woven. Applicants respectfully take exception to this characterization of Schottenfeld. Schottenfeld fails as a reference since it neither teaches nor suggests a structure comprising a scrim embedded in a continuous foamed resin. Schottenfeld clearly discloses that the foamed resin is not continuous and comprises apertures which extend from one surface of the structure to the other.

The deficiencies in Schottenfeld are not cured by combination with Owen '845 or Owen '371. Owen '845 and Owen '371 are based on the same application and therefore contain the same disclosure. Owen '845 and Owen '371 do not cure the deficiencies in Schottenfeld. Both references disclose a scrim which is coated with a foamed plastic; however, the coating is not continuous since the coating merely covers the strands of the scrim and leaves large apertures which extend from one surface of the foamed plastic coated scrim to the opposite surface. Applicants submit that the combination of Schottenfeld with Owen '845 or Owen '371 neither teaches nor suggest the present invention which is a scrim embedded in a continuous foamed plastic. Applicants submit that the rejection is untenable and respectfully request that the rejection be

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reconsidered and withdrawn.

Claims 7, 9 and 14 stand rejected under 35 USC 103(a) as unpatentable over Schottenfeld in view of Hawley et al. '174 or Hawley et al. '796. Applicants respectfully submit that Schottenfeld, Hawley et al. '174 or Hawley et al. '796 whether considered alone or in combination neither teach nor suggest the present invention. In the rejection, the Examiner characterized Schottenfeld as disclosing the claimed invention except for the teaching that the sheet product has a thickness from 45 to about 150 mills and at least one side has been smoothed. Applicants respectfully submit that this is a mischaracterization of Schottenfeld. In addition to the deficiencies noted by the Examiner, the major deficiency in Schottenfeld is the teaching that the foamed plastic coating is not continuous.

The deficiencies in Schottenfeld are not cured by combination with Hawley et al. '174 or Hawley et al. '796. Both Hawley et al. '174 and Hawley et al. '796 are based on the same application and have the same disclosure. The two Hawley et al. references will be discussed merely as Hawley et al.

Hawley et al. do not cure the deficiencies in the teaching of Schottenfeld. As discussed above, Schottenfeld is deficient in neither teaching nor suggesting that the structure is a scrim embedded in a continuous coating of a foamed resin. That is, a coating which does not have apertures which extend from one surface of the foamed resin coated scrim to the other surface.

Hawley et al. do not cure the deficiencies in Schottenfeld since Hawley et al. teach that the scrim does not have a continuous foamed resin coating. Applicants invite the Examiner's attention to Fig. 2 and the disclosure at col. 2, lines 54-57. Applicants respectfully submit that there is neither teaching nor suggestion to make the porous foam of Hawley et al. continuous to cure the deficiencies in Schottenfeld. Applicants therefore respectfully submit that the combination of references neither teaches nor suggests the present invention. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claims 6, 8 and 13 stand rejection under 35 USC 103(e) as unpatentable over Schottenfeld and Hawley et al. '174 or Hawley et al. '796. And further in view of McDermott, III et al. (US. 5,120,587). Applicants respectfully submit that Schottenfeld, Hawley et al. and McDermott, III et al., whether considered alone or in combination neither teach nor suggest the present invention.

The Examiner mischaracterizes Schottenfeld and Hawley et al. The Examiner states that Schottenfeld and Hawley et al. disclose the claimed invention except for the teaching that the foamed resin is a foamed polyvinyl chloride plastisol and that the sheet product has a thickness of about 55 to 100 mills. This characterization of Schottenfeld and Hawley et al. is incorrect when compared to the invention as presently claimed.

The present invention is a composite sheet product comprising a scrim embedded in a continuous coating of a foamed resin. Neither Schottenfeld nor Hawley et al. teach or suggest a scrim embedded in a continuous coating of a foamed resin.

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The deficiencies in the combination of Schottenfeld with Hawley et al. are not cured by combination with McDermott, III et al. McDermott, III et al. discloses a support binder for a carpet having apertures which extend from one surface to the other. The non-continuous nature of the foamed resin coating on the scrim is similar to the non-continuous coating disclosed in Schottenfeld and Hawley et al. Applicants respectfully submit that McDermott, III et al. does not cure the deficiencies in the combination of Schottenfeld and Hawley et al. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claim 15 stands rejected under 35 USC 103(a) as unpatentable over Schottenfeld in view of Juriga (US 5,536,556). Applicants respectfully submit that Schottenfeld and Juriga whether considered alone or in combination neither teach nor suggest the present invention. As stated above, Schottenfeld is deficient in at least neither teaching nor suggesting a scrim embedded in a continuous coating of a foamed resin. The deficiencies in Schottenfeld are not cured in combination with Juriga.

Juriga discloses a laminate in which one lamina is a foam. However, the spun bonded polyester fiber mat of Juriga is not embedded in the foam, but is merely attached by an adhesive material. Applicants submit that spun bonded fiber mats are well known in the art. However, the use of the spun bonded fiber mats in Juriga would neither teach nor suggest that the spun fiber mat be embedded in the Schottenfeld structure to form the structure of the present invention. Applicants submit that if the spun bonded mat of Juriga were embedded in the foamed resin of Schottenfeld, the structure would not be the same or equivalent to the structure of the composite sheet product of the present invention. As discussed above, Schottenfeld discloses the foamed plastic covering the scrim is not continuous. Applicants submit that the combination of Schottenfeld with Juriga would neither teach nor suggest a scrim embedded in a continuous layer of a foamed plastic. Applicants respectfully submit that the combination of Schottenfeld with Juriga would neither teach nor suggest the present invention. Reconsideration of the rejection is respectfully requested.

Claims 4 and 12 stand rejected under 35 USC 103(a) as unpatentable over Hawley et al. '174 in view of Owen '845 or Owen '371.

The Examiner states Hawley et al. discloses the claimed invention except for the teaching that the scrim is non-woven. Applicants disagree with the Examiner's characterization of Hawley et al. since Hawley et al. neither teaches nor suggests embedding the scrim in a continuous coating of a foamed resin. Clearly, Hawley et al. discloses a structure having a non-continuous coating on the scrim. (See fig. 2, and col. 2, lines 55-57). Deficiencies in Hawley et al. are not cured by combination with Owen '845 or Owen '371 which are the same disclosure. Again, the Owen references disclose a scrim coated with a non-continuous coating of a foamed plastic. Applicants submit that the large apertures between the coated fibers of the scrim would neither teach nor suggest the continuous coating required in the structure of the present invention. Applicants therefore respectfully submit that Hawley et al. in view of Owen '845 or Owen '371 would neither teach nor suggest the present invention. Clearly, there is neither teaching nor suggestion in the references considered

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alone or in combination, to lead one skilled in the art to form a structure comprising a scrim embedded in a continuous foamed plastic coating. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claims 6, 8 and 13 stand rejected under 37 USC 103(a) as being unpatentable over Hawley et al. '174 in view of McDermott, III et al. Applicants respectfully submit that Hawley et al. '174, and McDermott, III et al. whether considered alone or in combination neither teach nor suggest the present invention.

Again, the Examiner mischaracterizes the teachings of Hawley et al. Clearly, Hawley et al. does not teach nor suggest a scrim embedded in a continuous coating of a foamed resin. As shown in Fig. 2 and Fig. 3 of Hawley et al., the scrim has large openings and only the individual strands in the scrim are coated with the foamed resin. Applicants submit that McDermott, III et al. does not cure the deficiencies in Hawley et al. since McDermott, III et al. also discloses a non-continuous coating on the scrim. Even if the foamed plastisol of McDermott, III et al. were used as the resin in Hawley et al., the combination would not provide the structure of the present invention since the foamed polyvinyl chloride plastisol would not form a continuous coating in which the scrim is embedded. Applicants respectfully submit that Hawley et al. '174 in view of McDermott, III et al. would neither teach nor suggest the present invention. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claim 15 stands rejected under 35 USC 103(a) as unpatentable over Hawley et al. '174 in view of Juriga. Applicants respectfully submit that Hawley et al. '174 and Juriga whether considered alone or in combination neither teach nor suggest the present invention.

The Examiner has again mischaracterized the teachings of Hawley et al. Hawley et al. does not disclose the claimed invention except for the teaching that the scrim is formed from spun strands. Applicants submit that Hawley et al. does not disclose a structure in which a scrim is embedded in a continuous coating of a foamed resin. Clearly, Hawley et al. teaches that the foamed resin does not provide a continuous coating over the scrim. The coating is over the individual filaments which form the scrim but leave large apertures which pass from one side of the scrim to the opposite side.

Juriga does not cure the deficiencies in the teachings of Hawley et al. '174. Juriga discloses a laminate. The fiber reinforcing scrim is not embedded in a continuous foamed plastic coating. In addition, the Juriga foam is not continuous. Applicants submit that there is neither teaching nor suggestion to make the foam plastic, in which the scrim is embedded, of Hawley et al. '174 continuous to arrive at the structure of the present invention. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claims 4 and 12 stand rejected under 35 USC 103(a) as unpatentable over Hawley et al. '796 in view of Owen '845 or Owen '371. Since Owen '845 and Owen '371 are the same disclosure, Applicants will discuss both as Owen.

Again, the Examiner misrepresents the teachings of Hawley et al. Hawley et al. does not disclose the

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claimed invention except for the teaching that the scrim is nonwoven. Hawley et al. teach a scrim coated with a foamed plastic which forms a non-continuous coating. There is no teaching or suggestion in the combination of references to make the foamed plastic coating continuous. Applicants respectfully submit that Hawley et al. and Owen whether considered alone or in combination neither teach nor suggest the present invention.

Claims 6, 8 and 13 stand rejected under 35 US 103(a) as unpatentable over Hawley, et al. '796 in view of McDermott, III et al. Applicants respectfully submit that Hawley et al. and McDermott, III et al. whether considered alone or in combination neither teach nor suggest the present invention. The Examiner again mischaracterizes the teachings of Hawley et al. Hawley et al. does not disclose the claimed invention except for the teaching that the foamed resin is a foamed vinyl plastisol and that the sheet product has a thickness of from 55 to about 100 mills. In addition to the deficiencies noted by the Examiner, the main deficiency of Hawley et al. is that the reference neither teaches nor suggests a composite sheet product comprising a scrim embedded in a continuous coating of a foamed resin. It is clear that Hawley et al. require that the foamed resin coating of the scrim be non-continuous to provide for major apertures which form a path from one surface of the structure to the other surface. Applicants invite the Examiner's attention in particular to Fig. 2 and Fig. 3 and col. 2, lines 59-61 of Hawley et al.

Applicants submit that McDermott, III et al. does not cure the deficiencies in Hawley et al. '796. McDermott, III et al. suffers from the same deficiency as Hawley et al. '796 in that the foamed resin coating on the scrim is not continuous. Applicants invite the Examiner's attention to Fig. 1b, Fig. 1c, Fig. 2, Fig. 3, Fig. 4, Fig. 5, Fig. 6 and Fig. 7.

Applicants respectfully submit that there would be no incentive to make the foamed resin coating of the embedded scrim continuous from the teaching of Hawley et al. '796 in view of McDermott, III et al. Applicants respectfully submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

Claim 15 stands rejected under 35 USC 103(a) as unpatentable over Hawley et al. '796 in view of Juriga. Applicants respectfully submit that Hawley et al. '796 and Juriga neither teach nor suggest the present invention.

Again, the Examiner is mischaracterizing the teaching of Hawley et al. Hawley et al. does not disclose the claimed invention except for the teaching that the scrim is formed from spun strands. The major defining feature in Hawley et al. is the disclosure of a scrim with a discontinuous coating of the foamed resin. This is far different than the structure of a scrim embedded in a continuous coating of a foamed resin of the invention.

Juriga does not cure the deficiencies in Hawley et al. '796 in that Juriga discloses a laminate structure in which the scrim is not embedded in a foamed resin. A laminate is far different from a composite structure of the present invention. In addition, the foam contains open pores (see col. 3, lines 13-16 and col. 4, line 66).

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Applicants submit that there would be no teaching nor suggestion to form a continuous coating of the foamed resin over the scrim from the combination of Hawley et al. '796 in view of Juriga.

Applicants respectfully submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

Claims 7 and 9 stand rejected under 35 USC 103(a) as unpatentable over Dehondt in view of Hawley et al. '174 or Hawley et al. '796. Since Hawley et al. '174 and Hawley et al. '796 comprise the same disclosure, the rejection will be discussed as if Hawley et al. was one reference.

The Examiner mischaracterizes Dehondt. The Examiner states that Dehondt discloses the claimed invention except for the teaching that the sheet product has a thickness of about 45 to about 100 mills and that at least one side has been smoothed. Applicants submit that Dehondt is not pertinent to the present invention since the major deficiency is that Dehondt neither teaches nor suggests a composite sheet product comprising a scrim embedded in a continuous coating of a foamed resin. Clearly, Dehondt does not disclose a continuous coating of a foamed resin. The foamed resin in Dehondt has apertures which extend from a first side to the second side of the structure. The deficiencies in Dehondt are not cured by combination with Hawley et al. which discloses a similar structure of a non-continuous foamed resin coating on a scrim. Applicants respectfully submit that even if the thickness disclosed in Hawley et al. were transferred to the Dehondt disclosure, the structure would not be the same or similar to the structure of the present invention. However, the Dehondt structure is far thicker than the 45 to about 150 mills to withstand the movement and stretching of a person sitting on the structure.

Applicants respectfully submit that Dehondt in view of Hawley et al. would neither teach nor suggest the present invention. Favorable consideration and withdrawal of the rejection is respectfully requested.

SUMMARY

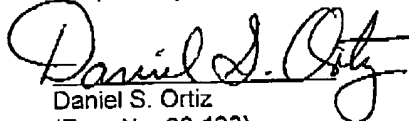
In reviewing all of the references cited by the Examiner, Applicants submit that the references considered alone or in combination neither teach or suggest a structure comprising a scrim embedded in a continuous coating of a foamed resin. All of the references teach structures in which the foamed resin is not a continuous coating over the scrim or that the scrim is not embedded in the foamed resin. Applicants submit that there is neither teaching nor suggestion in the references whether considered alone or in combination to modify the discontinuous coated scrim to form a scrim embedded in a continuous coating of the foamed resin to achieve a structure with the advantage of the structure of the present invention.

As stated in the present application, the continuous coating has certain advantages such as the impermeability to spilled liquids which are not possessed by the structures in the references cited by the Examiner. The advantages are due to the continuous foamed resin coating of the embedded scrim.

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Applicants therefore respectfully submit that the rejections formulated by the Examiner are untenable and respectfully request that the rejections be reconsidered and withdrawn.

Respectfully submitted,



Daniel S. Ortiz
(Reg. No. 28,123)
Attorney For Applicant
(610) 278-4920

Henkel Corporation
Law Department
2500 Renaissance Blvd.
Gulph Mills, PA 91406
/mlc

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